total amount of energy which will be transmitted from the flame to the combustion chamber, one is placed in the position to ascertain this value by measurement. This will be equal to the difference between the total quantity of energy which is brought into the combustion chamber and that which leaves it. For example, let it be assumed that in an open-hearth furnace both the producer gases named have been employed— at the one time the best, at the other, the worst producer gas. Let the 1*3 times amount of air have been employed for combustion, and let the preheating of the gas and air have been driven to the point that the resultant temperature of the flame will have exactly reached 1,800°, whilst the available

ENERGY SUPPLIED TO THE COMBUSTION CHAMBER.

	Best Gas.	Worst (las.
(a) Available heat of the products of combustion of an amount of gas containing 1 kilogramme C at 1,800° C : OOa 0 .... N . Steam .	Ca-1 or i o.s. 1*86 X 0-8378=1-0585 ! £23 j-X 0-3704=4-0877 0-1)8 X 0-7713=0-7738	OuloricsH l-8(> X 0-8378 = 1-5385 10-23 f XO-37<M =4-0877 1-13 X0-7713~0-871<>
	G-4020 X 1,800	C-5178 X 1,800
(6) Energy drawn off from the combustion chamber. Available heat of the waste gases at 1,700° : 003 . 0 .... N . . . . Steam .	11,524 1-86 X0'8128=l-5118 10'23} X 0-3725=4 '0-15;* 0-98 x<)'7482=<)-7332	11,732 1*8(5 X 0-8128 = 1-511 8 1 0-!!;! ! x <)^725=4-0453 1 -13 X 0'7482 —0-8434
	(>*2903 X 1,700	C-4025 X 1,700
Given up to combustion chamber. a ... -I . a-l .	Calories. 11,524 — 10,(>43 831	O'ulorloH. 11,732 — 10,88-1 848